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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

Fifty-third session
Geneva, 25 June-4 July 2018
Item 2 (j) of the provisional agenda
Explosives and related matters:
Miscellaneous

Update of the reference to ISO 12097 in section 2.1.3.6.4 of the Model Regulations

Transmitted by the expert from the Germany*

Introduction

1. The standard ISO 12097 is mentioned in the Model Regulations in section 2.1.3.6.4 (b) and is referenced as an example, how to perform a fire test on a single explosive artic'e being candidate for exclusion from class 1.

2. According to section 2.1.3.6.4, one of the criteria for the exclusion from class 1 of an explosive article is to test on "*... no rupture or fragmentation of the external casing ...*" when operated as designed or comes to functioning by an external fire.

3. During the fifty-second session the update of the reference to the more current and more suitable standard ISO 14451 was discussed on the basis of informal document INF.10. The conclusion was general support for the suggested replacement of the reference. The report of the "Working group on Explosives" (see informal document INF.53 (52nd session)) indicated that Germany would come forward with a formal proposal. The proposal in this paper offers the amended wording as it resulted from the discussion in the working group.

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

Background

4. The standard ISO 12097 was first published in 2002 with the scope being airbag components and inflators. During the time after the standard had been published, experts began to narrow down the specifications of the fire test described in section 7.4 of part 3 of this standard, in order to guarantee more reproducible and comparable test results. The improved specifications entered the text of the more recent standard ISO 14451, which in addition has a wider scope being "pyrotechnic articles for vehicles" in general.

5. Therefore, the fire test described in part 3 of ISO 14451 is technically a direct replacement of the fire test currently referenced in the Model Regulations, the only difference being improved specifications enabling better application of the test. And, since criteria and test description have been separated in the ISO 14451 series, the heating rate of 80 K/min to be applied in the test, now needs to be mentioned explicitly to be consistent with the previous prescriptions. The background repeated in brief here, had already been appreciated by the "Working Group on Explosives" during the last session.

Proposal

6. Replace in section 2.1.3.6.4 of the Model Regulations the reference to ISO 12097-3 by the corresponding reference to ISO 14451-2 explicitly mentioning the heating rate of 80 K/min, as indicated below.

7. Amend the Note in 2.1.3.6.4 (b) to read as follows (amendment underlined):

"***NOTE:*** *Where the integrity of the article may be affected in the event of an external fire, these criteria shall be examined by a fire test such as described in ISO 14451-2 while using a heating rate of 80 K/min.*"